

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**CUSTOMER NO. 26645**

In re Application of: William K. S. Cleveland et al.

Serial No.: 10/511,248

Examiner: Vishal V. Vasisth

Filed: October 13, 2004

Art Unit: 1797

Title: Method and Lubricant and Fuel Compositions for Two-Stroke Engine  
Containing Power ValvesHon. Commissioner for Patents  
U.S. Patent & Trademark Office  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Dear Sirs:

**DECLARATION UNDER 37 C.F.R. §1.132**

I, Brent R. Dohner, declare as follows:

I received a PhD in organic chemistry in 1985 from the University of Rochester.

I have been employed by The Lubrizol Corporation since 1990. Since that time I have been responsible for many aspects of technical development of engine oil lubricants. These include formulating passenger car motor oils, heavy duty diesel lubricants, as well as 2-Stroke products. I currently serve as the technical lead and primary platform developer for all 2-Stroke engine lubricants.

I am familiar with the invention claimed in the above-mentioned case.

I certify that this correspondence is being filed electronically via EFS with the U.S. Patent & Trademark Office, Mail Stop Patent Application, Commissioner for Patents, Alexandria, Virginia, on	
on <u>12-5-09</u>	By: <u>Nancy S. Dedek</u>
Date of Deposit	Nancy S. Dedek

In order to illustrate the improvement in performance provided by the compositions of the above reference application, the following experiments were performed under my direction:

Examples 9, 10, 11 and 12 were prepared with the same formulation as Example 6 of the present application (see footnote h under the Table that starts on page 20 of the specification) except that each of the new examples contains 1.6 wt% of the isostearic acid-tetraethylenepentamine reaction product (B)(1) and then each new example contains a unique amount of the Mannich reaction product (B)(2). The examples are otherwise identical to Example 6, as well as each other, in all other respects. The amounts of the (B)(1) and (B)(2) components in each of the samples is shown in Table I below.

These examples were then tested to determine a power valve rating using the same test procedure carried out in the present application (see footnote k under the Table that starts on page 20 of the specification). A power valve rating of 3 or higher is internally considered an acceptable result, however higher ratings indicate better performance and are more desirable. The results of the new samples are provided in Table I below:

*Table I – New Example Test Results*

Example No <i>Claims Require</i>	%(B)(1) (≥ 1.6 %wt)	%(B)(2)	%(B)(1) + %(B)(2) (5.5 to 20 %wt)	Power Valve Rating
9	1.6	4.0 (Mannich)	5.6	3.75
10	1.6	5.0 (Mannich)	6.6	4.39
11	1.6	6.0 (Mannich)	7.6	3.50
12	1.6	9.1 (Mannich)	10.7	5.46

All of the inventive examples provide power valve ratings above 3, and their results are higher, and so indicate superior performance, compared to the results from the comparative examples provided in the present application.

Table 2 below combines the data from the specification of the present application with the data obtained from the new examples presented above. The data is organized by the power valve rating test results, starting with the sample with the lowest result, and so worst performance, down to sample with the highest power valve rating, and so best performance.

Table 2 – New Data and Data from the Specification

Example No <i>(Claims Require)</i>	%(B)(1) <i>(≥ 1.6 %wt)</i>	%(B)(2)	%(B)(1) + %(B)(2) <i>(5.5 to 20 %wt)</i>	Power Valve Rating
1 <i>(comparative)</i>	0	0 <i>(7.2 % PIBSA Dispersant)</i>	0	2.1
5 <i>(comparative)</i>	1.15	5.9 (Aminophenol) <i>(+ 1.3 % PIBSA Dispersant)</i>	8.35	2.8
3 <i>(comparative)</i>	1.2	6.6 (Aminophenol)	7.8	3.1
7 <i>(comparative)</i>	6	0 <i>(5.6% PIBSA Dispersant)</i>	6	3.4
11 <i>(within claims)</i>	1.6	6.0 (Mannich)	7.6	3.50
4 <i>(within claims)</i>	3	6.6 (Aminophenol)	9.6	3.8
9 <i>(within claims)</i>	1.6	4.0 (Mannich)	5.6	3.75
8 <i>(within claims)</i>	6	4.8 (Aminophenol)	10.8	4.3
6 <i>(within claims)</i>	2	7.4 (Mannich)	9.4	4.6
10 <i>(within claims)</i>	1.6	5.0 (Mannich)	6.6	4.39
12 <i>(within claims)</i>	1.6	9.1 (Mannich)	10.7	5.46

Formulations that contain the specified components of (B)(1) and (B)(2) in the amounts required by the claims surprisingly provide higher power valve ratings

compared to compositions that are missing either (B)(1) or (B)(2) and/or contain too little (B)(1) or too small a total amount of (B)(1) and (B)(2). The data demonstrates that the compositions of the present invention provide improved power valve ratings over compositions outside of the claims ranges and limits.

I further declare that all statements herein made of my own knowledge are true and all statements herein made on information and belief are believed to be true. I understand that willful false statements and the like are punishable by fine or imprisonment or both (18 U.S.C. 1001) and may jeopardize the validity of the application or any patent issuing thereon.

A handwritten signature in cursive script, appearing to read "Brent R. Dohner", written in dark ink.

Brent R. Dohner

Feb 5, 2009 (date)